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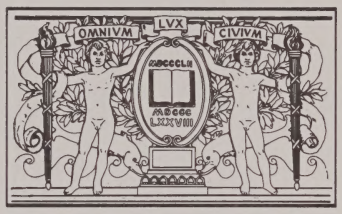

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FROM A MILITARY TO A HOUSING BUILDUP:

THE IMPACT IN BOSTON OF A SIX PERCENT SHIFT IN THE FEDERAL BUDGET FROM THE MILITARY TO HOUSING

Rebecca Stevens
Peter Dreier
Jeff Brown

Boston Redevelopment Authority
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Stephen Coyle, Director
Boston Redevelopment Authority

Alexander Ganz
Assistant Director for Policy Development and Research

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Introduction

How much of Boston's housing need could be met if 6 percent of the military budget were shifted to housing programs? This is the question posed by this report, which has been issued in response to a November 1987 Boston referendum which calls for an annual $25 billion shift in spending from the military to federal housing programs. The referendum also directs the City to document the extent of its housing need and the share of Boston residents' federal tax dollars that goes toward military spending.[1]

This report will show that:

- A relatively small (6 percent) shift from the military budget to the federal housing budget in the FY 1989 budget would enlarge the federal housing budget to more than four times its current size, from $7.6 billion to $32.6 billion.

- Boston's annual share of the new housing budget after such a shift ($153 million) would meet the city's new housing need for the years 1990 to 2000. In fact, Boston would be able to subsidize the construction of 2,290 low-income and 2,290 moderate-income housing units per year -- more units than the city will need for every year between 1990 and 2000.

- This new residential construction would also create approximately $2.4 million in new annual property tax revenues for Boston.

- In addition, a shift in spending from the military to housing would create 7,400 additional jobs in the Boston area.

- Alternatively, the additional housing revenues could provide rent subsidies to every Boston tenant household, paying over 30 percent of its income toward rents to bring the rent down to that level. This would cost $106 million. The remaining $47 million would subsidize new construction of 1,400 low- and moderate-income units.[2]

Section 1 of this study summarizes the relative shift of the federal budget from housing to military spending since 1981 and its impact on the nation's shortage of affordable housing. Section 2 describes Boston's housing needs. Section 3 describes the impact in Boston of a 6 percent shift in the federal budget from the military to housing. Section 4 describes the jobs impact in the Boston area of a 6 percent shift.

Section 1

$25 Billion -- A Small Portion of the Military Budget, a Large Increase for Housing

Federal expenditures since 1981 have been marked by a significant shift from housing to the military. While the military budget has increased dramatically, federal expenditures on housing have been cut more sharply than have expenditures on any other federal activity:

- As a percentage of the federal budget, the federal Department of Housing and Urban Development (HUD) budget declined from 3.3 percent in FY 1981 to .6 percent in the FY 1989 budget.
- Total budget authority for HUD programs was cut from $32.2 billion in FY 1981 to $7.9 billion in FY 1989, a reduction of over 82 percent in real terms (see Table 1).[3]
- The number of HUD-assisted housing starts fell from 144,348 in FY 1981 to a projected 21,846 in FY 1989; most of the recent HUD-assisted construction activity is the result of pre-1981 commitments.[4]

While the HUD budget has been cut, national housing prices have spiraled upward. The cost of housing has increased far faster than that of other goods and services; wage increases have been smaller. As a result, many middle class Americans cannot afford to buy a house and millions of lower-income families have been forced to double up, pay more of their income for housing, or live on the streets or in shelters.

For the first time since World War II, the nation has experienced a decline in the number of Americans who own their own homes. Homeownership has become particularly unattainable

TABLE 1

FEDERAL SPENDING ON HOUSING AND THE MILITARY, FY 1981 - FY 1989

($ millions)

BUDGET CATEGORY	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88	FY89 (2)
HUD	32,201	18,908	14,290	14,088	11,747	10,456	8,395	8,635	7,851
MILITARY	210,160	247,559	276,302	305,778	344,371	370,927	378,964	392,772	404,176
Defense Function	157,513	185,309	209,903	227,413	252,748	273,375	281,999	290,361	298,255
Int'l Security Assistance	5,095	5,416	6,613	7,924	9,391	10,499	7,106	4,500	2,823
National Aeronautics and Space Administration (1)	----	----	1,089	534	732	770	759	909	1,068
Military Portion of Net Interest on Public Debt	47,552	56,834	58,697	69,907	81,500	86,283	89,100	97,002	102,030

1. Military activities of NASA only.

2. HUD and military budgets estimated for FY 1989.

Sources: National Low Income Housing Information Service; Military Spending Research Services, Inc.

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for young families:

- For all age groups under 40, homeownership rates declined significantly between 1980 and 1987. For heads of household aged 25 to 34, for instance, homeownership rates fell from 52.3% to 45.1%.[5]

- In 1949, the average 30-year-old homebuyer in the U.S. needed to spend 14 percent of his or her paycheck to afford the typical single-family home. By 1985, the figure had risen to 44 percent.[6]

The decline in homeownership has put more pressure on the country's existing rental housing supply, since many would-be homeowners are now reluctant renters. For both low-income and middle-class working families, competition is intense for the almost-static supply of rental housing. The result is the highest level of real rents in two decades.[7] The effects of this are severe for the poor: among renter households with incomes below $5,000 in 1987, less than one-third received subsidies. Of families with incomes in the $5,000-10,000 range, less than one-quarter received assistance.[8]

The affordable housing shortage has triggered a new national concern and discussion about federal housing policy. For example, several major studies on the nation's housing crisis were released in 1988.[9] Whereas, three years ago, housing was not a priority in Congress, there is now a new interest in introducing new housing programs and revitalizing housing programs that have been cut since the early 1980's. In 1988, at least thirteen housing bills were sponsored, many of them proposing significant increases in spending for housing. Since the federal deficit is an overriding concern of federal

government officials, however, increases in housing spending are unlikely to occur without reductions in other areas of the federal budget or new tax revenues.

The military budget has increased sharply since 1980. At the same time, however, public approval of increases in military spending has eroded and a growing number of experts suggest that cuts could be made in the military budget without jeopardizing national security.

The military budget covers a wide range of activities. It consists of four categories:[10]

- The "defense function" includes the Department of Defense; Department of Energy defense activities (such as the manufacture of materials for nuclear warheads and the production of warheads themselves); and the defense-related activities of several smaller programs (such as the Selective Service, the Federal Emergency Management Agency (FEMA), and the Ready Reserve Fleet). In the current FY 1989 budget, this category will cost $298.3 billion.

- International security assistance includes programs to enhance the ability of U.S. allies to recruit, train, and equip forces that help to defend U.S. and allied national interests. In the current FY 1989 budget, this category will cost $2.8 billion.

- Military activities of the National Aeronautics and Space Administration (NASA) includes research and testing of aeronautical technologies incorporated into military aircraft and the operation of the space shuttle. In the current FY 1989 budget, this category will cost $1.1 billion.

- Military-related interest on the federal debt is the interest on the portion of the federal deficit that results from military spending. In the current FY 1989 budget, this category will cost $102.0 billion. About one-half of the federal government's interest payment on the national debt in FY 1990 will be attributable to past military expenditures.

Table 1 (on p. 4) compares spending for each military

budget category from FY 1981 to FY 1989 to spending on the HUD budget. It reveals that, since 1981, the overall military budget has increased from $210.2 billion to $404.2 billion, an increase of 50 percent.

In FY 1989, the federal government will spend 48 cents of every federal income tax dollar on the military-related programs listed above.[11] The cost to Boston residents will be high. Boston residents are expected to pay $4.4 billion in federal income taxes in FY 1989. An estimated $1.9 billion of these taxes will go to the federal government's military expenditures.[12]

Recent public opinion polls indicate that public support for increased military spending has declined sharply in recent years:

- In a 1985 Harris Survey poll, 87 percent of those polled thought there was too much waste in military spending.
- In a 1986 poll conducted by ABC News and the Washington Post, 56 percent thought government should cut military spending to reduce the deficit.
- A 1988 survey conducted by three private polling firms found that most Americans (52 percent) believe military spending should be cut, 37 percent believe it should remain the same, and only 8 percent favor spending more.[13]
- A 1989 survey, conducted for the Times Mirror Company by the Gallup Organization, asked where and how much federal budget cuts should be made. About half the total amount cut by those surveyed came out of the military budget.[14]

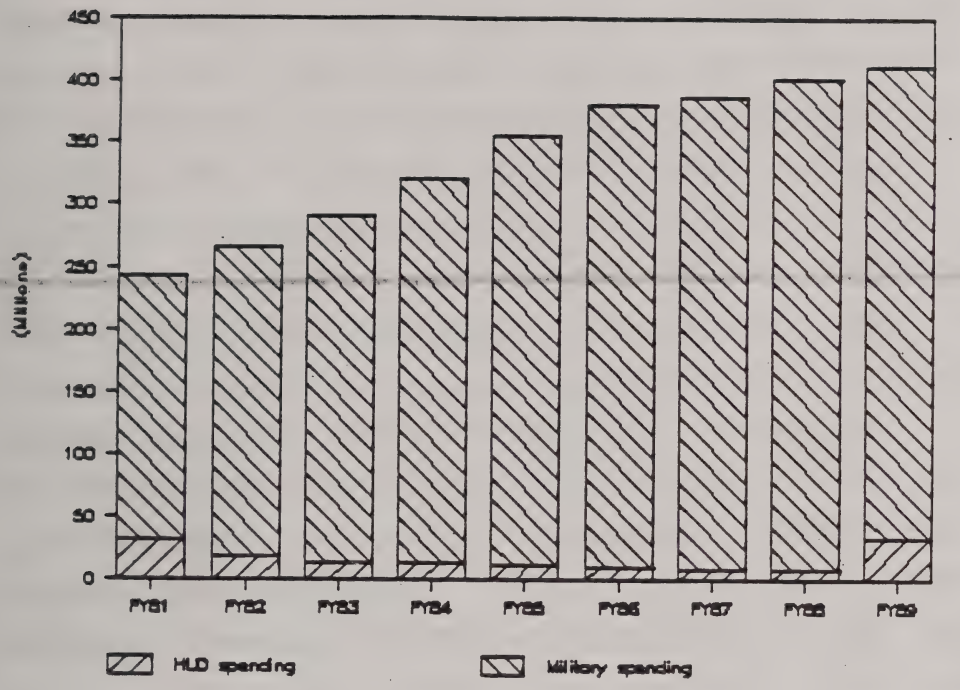
Many defense and foreign policy experts suggest that there is room for a reduction in the military budget without diminishing national security. A 1988 Harvard Business School study estimated that about $67 billion of current military

spending could be saved without reducing the number of weapons produced.[15] Robert Costello, the Pentagon's Director of Procurement during the Reagan Administration, "has commented that 30 percent of the Pentagon's $150 billion procurement budget is squandered on misguided quality control and make-work exercises that don't yield better arms."[16] Some experts suggest that the Soviet Union's recent apparent willingness to negotiate arms control agreements -- which will save the resources of both sides (and probably improve stability as well) -- provides the opportunity for the federal government to reassess its assumptions about military spending.

The referendum passed by Boston voters in November 1987 called upon Congress to annually shift $25 billion from the military to the federal housing budget. A shift of $25 billion from the military budget toward housing in the FY 1989 budget would mean only a 6 percent decrease in the military budget (from $404.2 billion to $379.2 billion) but would create a federal housing budget more than four times as large ($32.9 billion rather than $7.9 billion). Figure 1 compares the military and HUD budgets with a 6 percent shift in spending from the military to housing for FY 1989. This figure shows that such a shift in spending would not significantly change the overall distribution of federal funds between the military and housing.

Figure 1

MILITARY AND HUD SPENDING, FY 1981 - FY 1989,
WITH A 6% SHIFT FROM THE MILITARY TO HUD IN FY 1989



Sources: National Low Income Housing Information Service; Military Spending Research Services, Inc.

Section 2

Boston's Housing Needs

Boston's affordable housing shortage has been more acute than that of the nation as a whole. During the 1980's, an expansion of population and employment in the city put extreme upward pressure on the city's housing prices. Only a few years ago, the Boston area's median single-family home price was close to the national median. By 1988, however, the Boston area's median home price was more than double the national median.[17] Between 1984 and 1988, the average single-family home price in the Boston area increased by 103 percent for new homes and 90 percent for existing homes.[18]

Wage increases in metropolitan Boston have lagged behind housing price increases. In 1988, the Boston area was the fourth least affordable housing market in the nation, with average-income families unable to qualify for a mortgage on the average home. Only 21.2 percent of all metropolitan Boston households qualified for a mortgage on the average home in 1988.[19]

Boston area rent increases have paralleled the city's dramatic increases in home prices. The median advertised rent in Boston increased from $455 to $736 between 1983 and 1987 -- a 62 percent increase[20]. Rents for the nation as a whole increased by only 27 percent during this period.[21]

Increased housing values have encouraged the conversion of existing rental apartments to condominiums. Condominium

conversion often increases the value of rental units, making them more expensive after conversion. Between 1980 and 1988, close to 20,000 rental units were converted to condominiums in Boston.[22] A new city ordinance, enacted in June 1988, has slowed the rate of condominium conversions by allowing conversion of regulated units only under certain circumstances. Conversions of non-regulated rental units, however, have continued.

Due to the lack of federal housing funds since 1981 and the new 1986 federal tax law, new rental construction in Boston (as well as nationwide) has declined significantly.

The human costs of these trends are high. During winter 1988-89, a census sponsored by the city's Emergency Shelter Commission counted 3,453 homeless people in Boston. The number of applications for Section 8 vouchers in the city increased from 3,976 in 1984 to 8,199 in 1987. In 1983, 59 percent of those persons in Boston with Section 8 vouchers were able to secure housing with their vouchers. By 1988, that rate had dropped to 43 percent.[23] The waiting list for public housing in Boston has grown to 13,000 families in 1989 while public housing turnover has declined. Finally, Boston area employers say they are facing increasing difficulty recruiting new employees; workers of all incomes are beginning to feel the effects of Boston's high housing costs.[24]

The demand for new assisted housing developments in Boston is an indication of the number of people who cannot locate housing that they can afford, despite unprecedented commitments

of local resources. For example, 6,700 applicants signed up for the 269 affordable rental units in the new Tent City development in the South End. For the Bricklayers and Laborers Nonprofit Housing Corporation project in the Charlestown Navy Yard in Boston, 687 households applied to get one of the 50 affordable condominium units in the project in 1988.

Boston has responded to federal housing cuts and dramatic increases in housing prices and rents by expanding its housing production and preservation efforts. Since 1984, there have been over 14,000 housing starts in Boston, despite a national downturn in housing starts. The city has developed housing -- using a variety of resources -- on a significant number of city-owned parcels acquired through foreclosure, surplus public buildings, and urban renewal sites. The property is sold for nominal amounts to enhance the affordability of the housing that is developed.

The Boston Housing Partnership (BHP) is a five-year-old broad-based collaboration of business, government, and neighborhood-based nonprofits which pool their resources to provide affordable housing. The BHP's first project was the rehabilitation of 700 housing units in 69 scattered-site apartment buildings. In 1986, BHP began its second project, the rehabilitation of 938 housing units in distressed structures in default to the U.S. Department of Housing and Urban Development. Other projects are underway.

In 1984, Boston instituted a housing linkage policy to

harness its commercial real estate boom for affordable housing. This policy requires developers of large commercial projects to build affordable housing or contribute money to build such housing. As of December 1988, 33 projects had committed approximately $45 million in housing linkage funds in Boston. Approximately $22 million of these funds have been allocated to 29 housing developments containing about 2,400 units of housing; 80% of these units will be affordable to low- and moderate-income residents. The linkage program has had no negative effect on Boston's development climate. Developers from all parts of the country are seeking to build in Boston. The city has one of the lowest office vacancy rate among major cities in the U.S..

Cities and states do not, however, have enough resources to replace the enormous federal cutbacks in housing programs, let alone keep their overall housing stock affordable. Despite the fact that Boston has mustered all available city and state resources for assisted housing production, these resources are not sufficient to meet the projected need.

Without federal help, the affordable housing shortage in Boston is likely to continue. The Boston area is projected to realize a 296,000 job gain between 1990 and the year 2000 -- an 11 percent increase.[25] Job growth, along with demographic changes such as the aging of Boston's baby boom population into prime household formation years, will create a household increase in the Boston area that will put additional pressure on the availability and affordability of housing in the city. Based on

Boston Redevelopment Authority population projections, the minimum number of new housing units which will be needed in the city of Boston between 1990 and the year 2000 will be 27,000.[26] This is an average of 2,700 units a year. In the absence of significant housing production in the city, housing prices will continue to increase over the long term, despite a recent slowdown in housing appreciation in the Boston area.

Moreover, many of the jobs expected to be created in the Boston area over the next several years will be in the services and retail trade sectors.[27] According to projections, over half of the jobs created in metropolitan Boston between 1990 and 2000 will be in these two sectors.[28] Jobs in these sectors pay, on the average, lower wages than any other non-farm job category; Boston employers in these industries will find workers especially difficult to find, since area housing prices and rents will be out of reach for many of these workers. For Boston's economic growth to continue unabated, housing assistance in the city will need to increase. The production of significantly more assisted housing units will only be possible with new federal housing subsidies.

Section 3

Impact of a 6 Percent Shift for Boston's Housing

A 6 percent shift in federal spending from defense to housing in FY 1989 would result in additional spending of $25 billion on housing nationally. This shift would create a federal housing budget more than four times as large as the current FY 1989 housing budget. **If these new housing funds were allocated to cities and towns based on population size, number of people living in poverty, and other indicators of need, $153 million of the funds would be allocated to the City of Boston and $375 million to the Boston area.**[29]

These funds could be spent in Boston in several ways. They could be used to build new affordable housing and/or they could be distributed directly to existing tenants as rent subsidies.

If Boston's $153 million share of the federal housing funds were spent on new housing construction, it would be used to fill the gap between what families can afford and new housing construction costs. Moderate-income families of four are considered by HUD and other housing agencies to earn between 50 percent and 80 percent of the area's median income. Currently, HUD's moderate-income range for a family of four in the Boston area is $23,450 to $34,000. A family at the top of this range, earning $34,000, can afford a home costing $82,200 (assuming a 10 percent down payment and a conventional mortgage at a 10 percent interest rate). A low-income family of four in the Boston area

is defined by HUD as earning less than $23,450. A family at the top of this income range, earning $23,450, can afford a home costing $51,000 (making the same assumptions as in the moderate-income example).

The development cost of a typical two-bedroom condominium or cooperative unit in Boston, excluding land costs, is approximately $100,000. Thus, a moderate-income family in Boston needs a subsidy of $17,800 to buy a new condominium or cooperative unit and a low-income family needs a subsidy of $49,000. (See Appendix A for calculations and assumptions). If the $153 million -- Boston's share of a 6 percent shift in federal spending from the military to housing -- were divided between an equal amount of moderate-income and low-income housing construction, they would subsidize the annual construction of 2,290 new condominium or cooperative units for moderate-income families and 2,290 new condominium or cooperative units for low-income families. Whether Boston's new housing subsidies were used to subsidize new moderate-income or new low-income housing (or both), the subsidies would be enough to meet Boston's projected average new housing need of 2,700 units a year between 1990 and the year 2000 and make these units affordable to low- or moderate-income families. (Table 2 shows the number of new housing units needed in Boston per year for the years 1990 to 2000 and the number of units that could be subsidized with funds from a 6 percent shift from the military to housing if the new funds were divided equally between moderate-income and low-income

TABLE 2

PROJECTED ANNUAL NEW HOUSING NEED IN BOSTON, 1990 - 2000, AND NEW ASSISTED UNITS IN BOSTON WITH A 6% SHIFT IN SPENDING FROM THE MILITARY TO HOUSING

Year	Projected Need in Add'l Housing Units (1)	New Assisted Units with a 6% Shift		Total Assisted Units
		Low-Income	Moderate-Inc.	
1991	2,407	2,290	2,290	4,580
1992	2,407	2,290	2,290	4,580
1993	2,407	2,290	2,290	4,580
1994	2,407	2,290	2,290	4,580
1995	2,407	2,290	2,290	4,580
1996	3,017	2,290	2,290	4,580
1997	3,017	2,290	2,290	4,580
1998	3,017	2,290	2,290	4,580
1999	3,017	2,290	2,290	4,580
2000	3,017	2,290	2,290	4,580
TOTAL	27,123	22,900	22,900	45,800

1. Annual average. Based on population projections in Margaret C. O'Brien and Deborah Oriola, Growth to the Year 2000 in the City of Boston: Population Projections (Boston, MA: Boston Redevelopment Authority, 1988) and assumptions presented in Greg Perkins, Boston's Housing Needs, 1985-2000 (Boston, MA: Boston Redevelopment Authority, 1987).

housing construction.)

Moreover, housing construction increases state and local tax revenues. Housing construction has such a strong positive effect on the local economy that many analysts say that the recent lag in state tax revenues in Massachusetts and other states is due, in part, to a slowdown in new housing construction.[30] Although few states tax home sales, state sales tax collections increase when developers buy building materials and "big ticket" appliances and home buyers buy furnishings. As a result, an increase in housing construction through increased federal spending on housing would boost state tax revenues. It would also increase localities' property tax base and revenues. If 4,580 new units per year were built in Boston with the new housing subsidies, and the value of each unit was equal to the sales price (half at $82,200 and half at $51,000), these new units would generate $2.4 million per year in new property tax revenues for the city.[31]

Alternatively, Boston's share of a shift in federal spending from the military to housing could be distributed to existing tenants as rent subsidies. Data on tenant incomes and rents in Boston reveal that, in 1988, it would have cost $106 million to provide every Boston tenant household paying over 30 percent of its income towards rent with enough subsidy to bring the rent down to 30 percent of household income.[32] (See Appendix B). Boston's $153 million share of a 6 percent shift in federal spending from the military to housing would meet this need, with

$47 million a year left for new housing construction for low- and moderate-income residents. This $47 million would enable the construction of about 1,400 low- and moderate-income housing units -- 700 for low-income residents and 700 for moderate-income residents.

Section 4

Impact of a 6 Percent Shift for Boston Area Jobs

In addition to creating housing, federal housing spending creates more jobs per dollar than military spending in the Boston area. If, for instance, $375 million of the military funds spent in metropolitan Boston in 1986 had been spent on housing construction instead, the Boston area would have benefitted from over 7,400 additional jobs. (See Appendix C for methodology).

These additional jobs created by a shift in federal spending from the military to housing in the Boston area would have been both direct jobs -- jobs created by businesses receiving federal housing funds -- and indirect jobs. Indirect jobs are created when businesses receiving federal housing funds in turn purchase goods such as wood, concrete, and glass from their local suppliers. This "second round" of purchases creates jobs over and above the jobs created in the firms receiving federal housing funds directly. These local suppliers, in turn, purchase goods and services from their suppliers such as truck services and cardboard backing for the glass they produce, creating even more jobs, and so on. Additional jobs are created when employees in businesses benefitting directly and indirectly from federal housing expenditures spend their earnings. The sum total of the jobs created by the secondary rounds of spending launched by federal housing spending in the area are called indirect effects. Economists sometimes call them multiplier effects.

Many different industries benefit from the construction of a house. Housing is a very decentralized industry: housing construction has a broad ripple effect on a vast number of interconnected businesses in diverse industries, many of which are in the Boston area. The materials, for example, that go directly into a typical house include lumber, concrete, shingles, insulation, wallboard, ducting, paint, nails, wiring, pipe, windows, doors, sinks, cabinets, and appliances such as refrigerators and stoves. Producers of each of these materials and items are each, in turn, supplied by a range of industries.

Moreover, many hours of direct labor goes into the construction of a typical house. Each nail that goes into a new home, for instance, has to be manufactured, transported, sold, and hammered into a wall.

The 7,400 additional jobs which would have been created -- directly and indirectly -- had $375 million of the military funds spent in the Boston area been spent on housing instead of on military contracts would have been in the following sectors: construction; transportation and public utilities; finance, insurance, and real estate; retail trade; wholesale trade; services; government; and agriculture, fishing, and forestry services.[33] Thus, almost all parts of the Boston area economy would benefit from an increase in federal spending on housing. Employment would have been greater in every major industry except manufacturing, where employment would only have been 0.2 percent less. With an increase in jobs, total personal income in the

area also would have increased -- by $147 million.

Conclusion

What will happen if the Bush Administration does not increase the federal housing budget? The federal deficit has emerged as an overriding concern in Washington, possibly taking precedence over any budget increases. But the affordable housing shortage shows no signs of subsiding nationally or in the Northeast region. The effects of the affordable housing shortage will continue: rising homelessness, increasing rents, declining homeownership, more overcrowding, and more families living in substandard conditions.

Businesses in Boston, New England, and other areas experiencing high housing costs will increasingly have to bear the costs of housing price increases through increased wage, recruitment, and/or worker transportation costs.[34] Many companies already transport workers daily from remote areas; many may have to introduce housing assistance plans for their employees. In December 1988, for instance, Boston's hotels were persuaded to create a $1 million housing trust fund for hotel workers by Local 26 of the Hotel and Restaurant Workers Union. Regions with high housing costs will continue to suffer employment losses as large firms move elsewhere because of the upward pressure housing costs are putting on wages.

The results presented above show that the vitality of the Boston area economy does not depend on continued high levels of military spending. On the contrary, the Boston economy would

have been better off in recent years had some of the military funds spent in the Boston area been spent on new housing instead, not even including the benefits of the housing itself. Everyone in the Boston area, businesses and housing consumers alike, would gain from a revitalized federal housing policy.

Endnotes

1. The referendum states that $25 billion is 9 percent of the military budget. According to the City of Boston's estimates, this amount was only 6 percent of the proposed FY 1990 military budget. The wording of the referendum is as follows:

> Shall the City Council and Mayor call upon Congress to annually fund an additional $25 billion (or 9 percent of the current military budget) community-based affordable housing program in new construction, homeownership, renovation, and rental assistance, of which $60 million would be for Boston. This program should be financed by reducing tax dollars spent on new nuclear systems, foreign military intervention, and Pentagon waste. In order to identify Boston's housing needs, the City Council and Mayor shall annually publish a report documenting these needs, as well as the contribution of Boston's taxpayers to military spending, and shall hold neighborhood hearings on the report.

The drafters of the referendum assumed that these funds would be allocated proportional to Boston's share of the national population. This report uses the method used by the federal government in allocating Community Development Block Grant (CDBG) funds, which is based on population as well as other indicators of need, such as the poverty level and the condition of the housing stock. Using the latter method, Boston would receive $153 million in new housing funds.

2. Based on the Department of Housing and Urban Development 1989 maximum allowable rent subsidy for Boston.

3. Real HUD spending reduction calculated using CPIs (all urban consumers) for mid-FY 1981 (March 1981) and mid-FY 1989 (March 1989).

4. Low Income Housing Information Service, The Fiscal Year 1990 Budget and Low Income Housing (Washington D.C.: Low Income Housing Information Service, March 1989). A federal action that has affected the supply and cost of housing indirectly, but no less substantially, is the limitation of tax incentives to the private sector for the production of rental housing in the Tax Reform Act of 1986.

5. William C. Apgar, Jr., The Nation's Housing: A Review of Past Trends and Future Prospects for Housing in America (Cambridge, MA: MIT Center for Real Estate Development, May 1988), p. 24.

6. Frank Levy and Richard Michel, The Economic Future of the Baby Boom (Washington, D.C.: The Urban Institute, 1985), p. 13.

7. William C. Apgar, Jr., The Nation's Housing: A Review of Past Trends and Future Prospects for Housing in America (Cambridge, MA: M.I.T. Center for Real Estate Development, May 1988), p. 8.

8. Ibid., p. 36.

9. Among them are a report, entitled A Decent Place to Live, outlining a new federal housing policy by a national housing task force assembled by Senators Alan Cranston and Alfonse d'Amato, co-chairmen of the Senate Housing Subcommittee, and chaired by developer James Rouse and David Maxwell, chairman of the Federal National Mortgage Association (Fannie Mae). Several reports proposed policies to preserve the nation's federally-subsidized, privately-owned housing stock at risk of loss. These included a report sponsored by the Neighborhood Reinvestment Corporation and authored by M.I.T. professor Phillip Clay entitled At Risk of Loss: The Endangered Future of Low-Income Rental Housing Resources and a report by the National Low Income Housing Preservation Commission entitled Preventing the Disappearance of Low Income Housing. Twenty background papers on a variety of housing subjects were commissioned by the Ford Foundation and authored by leading academic experts and practitioners under the direction of M.I.T. professor Langley Keyes.

10. The definition of military spending used in this paper is the one used (excluding veteran's benefits) by Military Spending Research Services, Inc. and the City of Baltimore.

11. Paul Murphy, Military Spending Research Services, Inc.. Virtually all military expenditures come from Federal Funds. Federal Funds come from general tax revenues (the bulk of which are income tax revenues) plus money the government must borrow to cover its deficits. Thus, the military share of Federal Funds (48 percent) is equivalent to the military share of the federal income tax.

12. Boston federal funds taxes in FY 1989 were estimated by multiplying Massachusetts federal funds taxes expected to be paid to the federal government in FY 1989 ($17.7 billion) by Boston's share of the state's gross regional product (22 percent). Boston taxes expected to go to the military in FY 1989 were estimated by multiplying total Boston federal funds taxes by the percentage of federal funds taxes going to the military (48.4 percent). The estimate of Massachusetts federal funds taxes expected to be paid in FY 1989 was obtained from the Tax Foundation in Washington, D.C.

13. Martilla & Kiley, the polling firm used by Michael Dukakis during his presidential campaign; Market Opinion Research, the polling firm used by President Bush during his presidential campaign; and the Daniel Yankelovitch Group.

14. E. J. Dionne, Jr., "Poll Finds Public Favors Sharp Cut in Arms Funds," New York Times, March 12, 1989.

15. J. Ronald Fox, The Defense Management Challenge: Weapons Acquisition (Cambridge, MA: Harvard Business School, 1988).

16. Employment Research Associates, A Shift in Military Spending to America's Cities: What it Means to Four Cities and the Nation (Washington, D.C.: U.S. Conference of Mayors, 1988), p. 8.

17. Home Sales vol. 3, no. 1 (Washington, D.C.: National Association of Realtors, January 1989).

18. U.S. Housing Markets (Detroit, MI: Lomas Mortgage USA, January 1989).

19. Ibid.

20. Unpublished survey of rents advertised in the Boston Globe during this period by Michael Stone of the University of Massachusetts - Boston.

21. William C. Apgar, Jr., The State of the Nation's Housing (Cambridge, MA: Joint Center for Housing Studies, 1988), ms, p. 51. This increase is for contract rents; contract rents exclude fuel and utilities, property taxes, and insurance.

22. Emily P. Achtenberg and Rebecca Stevens, Losing Ground: The Impact of Condominium Conversions on Boston's Housing Stock and Neighborhoods (Boston, MA: Massachusetts Tenants Resource Center, 1988), p. i.

23. U.S. Conference of Mayors, A Status Report on Hunger and Homelessness in America's Cities, 1988 (Washington D.C.: U.S. Conference of Mayors, 1989), p. 63.

24. See Ann Greiner, The Housing Affordability Gap and Boston's Economic Growth: Potential for Crisis (Boston, MA: Boston Redevelopment Authority, 1987).

25. NPA Data Services, Inc. Regional Economic Projections, 1987 Series, vol. 2 (Washington D.C.: NPA Data Services, Inc., 1988).

26. 26.Boston Redevelopment Authority projections are from Margaret C. O'Brien and Deborah Oriola, Growth to the Year 2000 in the City of Boston: Population Projections (Boston, MA: Boston Redevelopment Authority, 1988). (Middle-range projections

were used). For the housing need estimates, group quarters population (not residing in housing units) was assumed to be 52,000, 54,000, and 56,000 in the years 1990, 1995, and 2000, respectively and average household sizes were assumed to be 2.40, 2.35, and 2.30. (Assumptions used are those presented in Greg Perkins, Boston's Housing Needs, 1985-2000 (Boston, MA: Boston Redevelopment Authority, 1987)).

27. Service sector jobs include such jobs as health services, legal services, educational services, and auto repair services.

28. Francoise J. Carre, The Economies of Boston and 34 Other Large Cities in the Year 2000 (Boston, MA: Boston Redevelopment Authority, April 1988)(preliminary), pp. 107 and 108.

29. Boston's and the metro area's share of the new housing funds was calculated using the estimated proportion of federal Community Development Block Grants Boston received in FY 1989 (.6%) and the five-county metro area received in FY 1987 (1.5%). If these new housing funds were distributed based on the Boston and metro area share of population alone, Boston would receive $60 million and the metro area $384 million.

30. Charles Stein, "We Are Not Alone: Five Northeast States Face Budget Woes," Boston Globe, March 19, 1989.

31. The residential property tax rate in Boston is $7.97 per thousand dollars of value. Moderate-income units would each create $655 in property tax revenue per year and low-income units would each create $406 per year.

32. Boston Housing Authority tenants were not included in this analysis.

33. Department of Defense contract actions over $1 million.

34. See Rebecca Stevens, "The Housing Crisis and New England's Economy: State and Local Initiatives to Offset the Federal Retreat," New England Journal Of Public Policy 5 (Winter/Spring 1989) and Peter Dreier, David C. Schwartz, and Ann Greiner, "What Every Business Can Do About Housing," Harvard Business Review (September-October 1988).

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APPENDIX A
SUBSIDY REQUIRED TO BUILD LOW- AND MODERATE-INCOME UNITS, 1989

	MODERATE-INCOME	LOW-INCOME
FAMILY INCOME (1)	$34,000	$23,450
MONTHLY COST AFFORDABLE TO FAMILY (2)	$850	$586
Monthly Mortgage Payment	$649	$403
Mortgage Insurance (3)	$21	$13
Property Taxes (4)	$66	$66
Residential Exemption	($12)	($12)
Hazard Insurance (5)	$26	$16
Condominium Fee	$100	$100
HOUSING UNIT PRICE AFFORDABLE TO FAMILY (6)	$82,200	$51,000
CONSTRUCTION COST (7)	$100,000	$100,000
PER-UNIT SUBSIDY NEEDED	$17,800	$49,000

1. U.S. Department of Housing and Urban Development.
2. Assuming family spends 30% of its income towards housing.
3. Mortgage amount x .0034.
4. Construction cost x .01077.
5. Mortgage amount x .004166.
6. Assuming a 10% down payment and a 30-year mortgage with a 10% interest rate.
7. Assuming no land costs.

APPENDIX B

THE RENT GAP: BOSTON TENANT RENT PAYMENTS OVER 30% OF INCOME, 1988 (1)

Household Income (2)	Monthly Rent Affordable (3)	Actual Avge. Monthly Rent (4)	% of Renter Households in Income Range (5)	No. of Renter Units in Income Range (6)	Per HH Gap, Monthly (7)	Per HH Gap, 1988	Total Gap, 1988 (8)
<$10,000	$125	$373	22%	27,170	$248	$2,976	$80,857,92
$10,000-24,999	$438	$489	33%	40,755	$52	$618	$25,186,59
$25,000-39,999	$813	$514	20%	24,700	$0	$0	$
$40,000+	$1,500	$700	25%	30,875	$0	$0	$
TOTAL			100%	123,500			$106,044,51

1. Non-Boston Housing Authority tenants.
2. From BRA 1985 Household Survey; trended to 1988 using wage data from Bureau of Labor Statistics.
3. Assuming each household pays 30% of its income towards rent.
4. From BRA 1985 Household Survey; trended to 1988 using rent data from survey of Boston Globe-advertised rents by Micha Stone at University of Massachusetts-Boston.
5. From BRA 1985 Household Survey.
6. Total number of 1988 rental units estimated using data presented in Rolf Goetze, Boston's Housing Stock 1970-2000 (BR December 1987).
7. Actual rent minus affordable rent.
8. Annual gap x number of households.

Appendix C

Estimates of employment changes in the Boston area resulting from a shift in federal spending from the military to housing were obtained using the BRA's Regional Economic Model. This econometric model is produced by Regional Economic Models Inc. (REMI) in Amherst, Massachusetts. The model covers the Boston metropolitan area -- Suffolk, Essex, Middlesex, Norfolk, and Plymouth counties. Data for employment by industry and personal income in the model are based on data series from the U.S. Department of Commerce, Bureau of Economic Analysis.

The primary data in this analysis are Department of Defense contract actions of over $1 million for contracts to business firms in the Boston metropolitan area in 1986. For this report, these contract actions were allocated to 2-digit Standard Industrial Classification (SIC) industries. Then, $375 million were subtracted from amounts in the 2-digit sectors in the model for 1986 (the amounts subtracted from each sector were proportional to the size of the sector). The sum of the reductions was then transferred to housing construction, represented by translator policy variables 201, 202, 204, and 205 as defined by REMI. A simulation of the shift by the model produced measures of the difference between the control forecast for 1986 and the forecast with the transfer of funds.